



U.S. Department
of Transportation
**Federal Highway
Administration**

October 8, 1999

400 Seventh St., S.W.
Washington, D.C. 20590

Refer to : HMHS-B57

Mr. Herman Goldman
Aloha Plastic Recycling, Inc.
75 Amala Place
Kahului, HI 96732

Dear Mr. Goldman:

Mr. Dean Alberson's September 21 letter to Mr. Richard Powers of my staff requested the Federal Highway Administration (FHWA) to accept your recycled polyethylene block for use with strong steel post w-beam guardrail on the National Highway System (NHS). To support this request, he also sent a copy of a videotape showing the impact performance of your block when attached to W150 x 13.5 steel posts with welded anchor plates and struck with an 820-kg pendulum dropped through a vertical height of 4 meters.

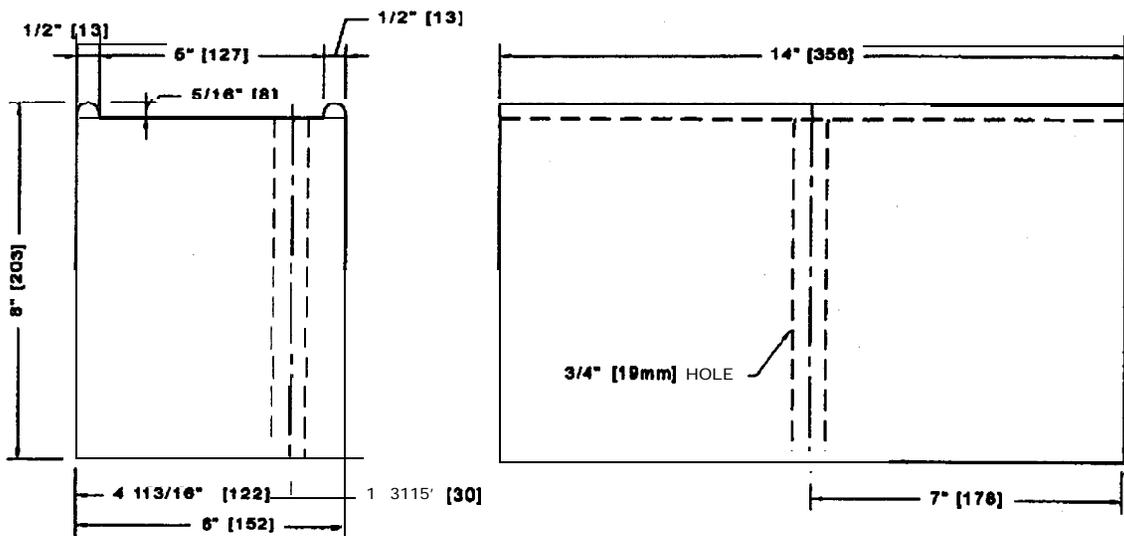
The tested blocks were flow-molded from recycled plastics and consisted of 90-96 percent high density polyethylene (HDPE), less than 2 percent each of low density polyethylene (LDPE), polyethylene terephthalate (PET), and polypropylene (PP). Approximately 4 percent colorant/W protection was added to the blocks. Two designs were tested. Both of these designs were nominally 150-mm x 200-mm **square** and 360-mm deep and had an 8-mm routing on the back faces to fit against the steel post **flange**. One was rectangular, while the second had a reduced cross-section as shown in the Enclosure 1. In all four tests that were conducted, the steel posts failed or buckled at their base plates and the blocks remained intact.

Based on our review of the information we received, the Aloha Plastic Block is considered acceptable for use on the NHS when molded to the same dimensions as either of the tested blocks and when its material composition falls within the ranges indicated above. As with similar products, this acceptance is based on the expected crash performance of your block and is not intended to address the long-term durability of your product. Since your product is proprietary, its use on Federal-aid projects, except exempt, non-NHS projects, is subject to the conditions listed in Title 23, Code of Federal Regulations, Section 635.411, a copy of which is enclosed for your reference (Enclosure 2). Please do not hesitate to call Mr. Powers at (202) 366-1320 should you have any questions.

Sincerely yours,

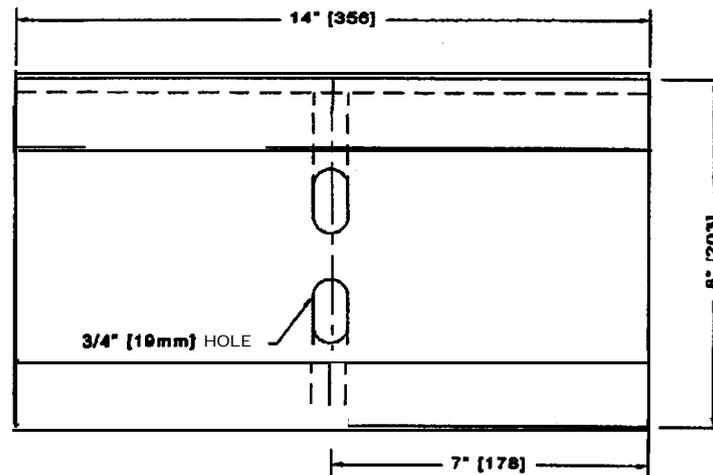
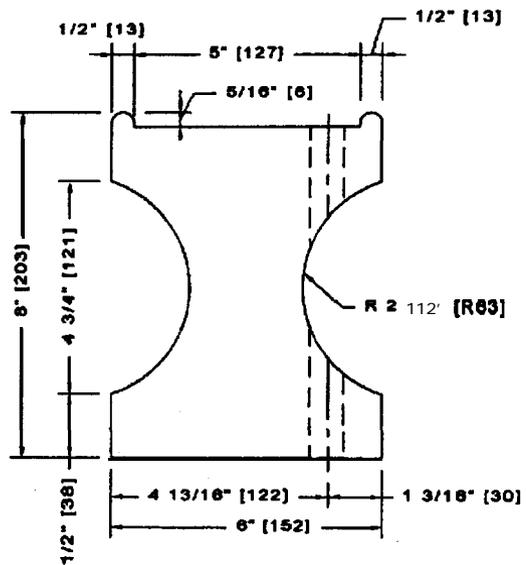
Dwight A. Home
Director, Office of Highway Safety Infrastructure

2 Enclosures



6" X 8" PLASTIC BLOCKOUT WITH LIP

U.S. PATENT No.		DATE:
PREPARED	T. CRUZ	08/23/99
ENGINEER	L. BULLARD	08/02/99
	D. ALBERSON	08/02/99
DESIGNED		
SCALE:	SHEET:	
1 = 4	2 OF 2	



6" X 6" PLASTIC BLOCKOUT WITH LIP

U.S. PATENT No:		DATE:	ALPHA PLASTICS 76 AMALA PL. KAHALAULU, HI 96732	
PREPARED	T. CRUZ	08/23/99	PRODUCED:	SAFETY QUEST, INC.
ENGINEER	L. BULLARD	08/02/99	<small>800 VIKING DRIVE CALABOGUE STATEMENT TO STATE</small>	
	D. ALBERSON	08/02/99	TITLE:	BLOCKOUT
REVISED				
SCALE:	REVISION:	SHEET:	APPROVED:	DATE:
1 = 4	1 OF 2	A	AP-FB-01	

Sec. 635.411 Material or product selection.

(a) Federal funds shall not participate, directly or indirectly, in payment for any premium or royalty on any patented or proprietary material, specification, or process specifically set forth in the plans and specifications for a project, unless:

(1) Such patented or proprietary item is purchased or obtained through competitive bidding with equally suitable unpatented items; or

(2) The State highway agency certifies either that such patented or proprietary item is essential for synchronization with existing highway facilities, or that no equally suitable alternate exists; or

(3) Such patented or proprietary item is used for research or for a distinctive type of construction on relatively short sections of road for experimental purposes.

(b) When there is available for purchase more than one nonpatented, nonproprietary material semifinished or finished article or product that will fulfill the requirements for an item of work of a project and these available materials or products are judged to be of satisfactory quality and equally acceptable on the basis of engineering analysis and the anticipated prices for the related item(s) of work are estimated to be approximately the same, the PS&E for the project shall either contain or include by reference the specifications for each such material or product that is considered acceptable for incorporation in the work. If the State highway agency wishes to substitute some other acceptable material or product for the material or product designated by the successful bidder or bid as the lowest alternate, and such substitution results in an increase in costs, there will not be Federal-aid participation in any increase in costs.

(c) A State highway agency may require a specific material or product when there are other acceptable materials and products, when such specific choice is approved by the Division Administrator as being in the public interest. When the Division Administrator's approval is not obtained, the item will be nonparticipating unless bidding procedures are used that establish the unit price of each acceptable alternative. In this case Federal-aid participation will be based on the lowest price so established.

(d) Appendix A sets forth the FHWA requirements regarding (1) the specification of alternative types of culvert pipes, and (2) the number and types of such alternatives which must be set forth in the specifications for various types of drainage installations.

(e) Reference in specifications and on plans to single trade name materials will not be approved on Federal-aid contracts.